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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,778	06/29/2001	Sharon E. Minder	BOC920000047US1	8891

23334 7590 12/17/2003

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EXAMINER

FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,778

Applicant(s)

MINDER ET AL.

Examiner

Jean B Fleurantin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1-36 remain pending for examination.

Response to Applicant's Remarks

2. Applicant's arguments filed on September 23, 2003, with respect to claims 1-36 have been fully considered but they are not persuasive because of the following:

A. In respect to applicant's argument on page 11, that "the Beavin reference does not teach tables that contain data base query elements, which are the elements of commands that are applied to the database management system to perform a desired search." The "tables" of Beavin differ from the "query element tables" of the claimed invention in that "query element tables" as are claimed in the amended claims of the present invention, "comprise at least one of a query language command and a command argument." It is respectfully submitted that Beavin discloses the claimed limitations as follow: Beavin discloses, "a method for performing database operations" as SQL provides tables operations with which users can request database information and form one or more new tables out of the operation results, (see col. 1, lines 25-27), "reading a first plurality of elements of a first query from a first set of one or more query element tables" as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads, and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information

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that is conventionally available to SQL optimizers (see col. 10, lines 50-64), “the first plurality of elements and the one more query element tables comprising at least one of a query language command and a command argument” as the SQL processor considers the available access paths to the data and considers system statistics on the data to be accessed to select what it considers to be the most efficient access path to evaluate the query and retrieve the results, in which considering the available access paths, the processor checks table indexes and sequential read operations needed, (see cols. 1-2, lines 61-2). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, in which can be linked to perform complex sets of table operations with a single statement;

“assembling a query string from the first plurality of elements” as another operation permitted by SQL is the ‘JOIN’ operation, which concatenates all or part of two or more tables to create a new resulting table (see col. 1, lines 33-35), “the query string comprising a database query command to be executed by a database search engine” as the computer system that represent commands for performing various search and retrieval functions against the databases 104, 106, in which these search and retrieval functions are generally referred to as queries, (see col. 6, lines 46-50); and

“executing the first query string to retrieve results from one or more source data tables” as wherein the query processor executed step of receiving comprises the steps of detecting a parameter of the query that indicates an access path will be specified by the user; and retrieving a data table that specifies the access path desired by the user, (see col. 15, lines 21-26).

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The claim does not capture the essence of the invention as argued in the Applicant(s)' remark page 9. Actually the Applicant(s)' is/are interpreting the claim narrow using the specification without considering the broad teachings of reference in the rejection.

Interpretation of Claims-Broadest Reasonable Interpretation, see MPEP 2111. During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

Therefore, the rejection in last Office Action is maintained.

Claim Rejections - 35 USC § 102

B. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-36 are rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,940,819 issued to Beavin et al. ("hereinafter Beavin").

As per claims 1, 16 and 31, Beavin discloses, "a method for performing database operations" as SQL provides tables operations with which users can request database information

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and form one or more new tables out of the operation results, (see col. 1, lines 25-27), “reading a first plurality of elements of a first query from a first set of one or more query element tables” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads, and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers (see col. 10, lines 50-64), “the first plurality of elements and the one more query element tables comprising at least one of a query language command and a command argument” as the SQL processor considers the available access paths to the data and considers system statistics on the data to be accessed to select what it considers to be the most efficient access path to evaluate the query and retrieve the results, in which considering the available access paths, the processor checks table indexes and sequential read operations needed, (see cols. 1-2, lines 61-2). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, in which can be linked to perform complex sets of table operations with a single statement;

“assembling a query string from the first plurality of elements” as another operation permitted by SQL is the ‘JOIN’ operation, which concatenates all or part of two or more tables to create a new resulting table (see col. 1, lines 33-35), “the query string comprising a database query command to be executed by a database search engine” as the computer system that represent commands for performing various search and retrieval functions against the databases

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104, 106, in which these search and retrieval functions are generally referred to as queries, (see col. 6, lines 46-50); and

“executing the first query string to retrieve results from one or more source data tables” as wherein the query processor executed step of receiving comprises the steps of detecting a parameter of the query that indicates an access path will be specified by the user; and retrieving a data table that specifies the access path desired by the user, (see col. 15, lines 21-26).

As per claims 2 and 17, Beavin discloses, “wherein the step of reading a first plurality of elements includes the sub-steps of reading a name of a second query element table from a first query element table” as the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 3-6); and

“reading a plurality of arguments for the query string from the second table query element” as sequential read operations needed, and the like to determine how it will retrieve data, the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 1-6).

As per claims 3 and 18, Beavin discloses, “wherein the step of assembling the query string includes the sub-step of assembling a query string that includes a first query language command and the plurality of arguments”, (see col. 1, lines 33-35).

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As per claims 4, 19 and 22, Beavin discloses, "wherein the step of reading a first plurality of elements of a first query from the first set of one or more query element tables further includes the sub-step of reading one or more names corresponding to one or more source data tables from the first query element table", (see col. 2, lines 1-6).

As per claims 5 and 20, Beavin discloses, "wherein the step of reading a plurality of arguments for the first query language command from the second query element table further includes the sub-step of reading a plurality of names of columns of the one or more source data tables from the second query element table as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads, and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column, in which to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, the selected query plan can be displayed to the user in response to the inclusion of the explain function in the user interactive commands, (see col. 10, lines 50-64).

As per claims 6 and 21, Beavin discloses, "wherein the step of assembling the query string includes the sub-step of concatenating together a first plurality of elements that include the name of the one or more source data tables and the plurality of names of columns" as another operation permitted by SQL is the "JOIN" operation, which concatenates all or part of two or more tables to create a new resulting table, and then performing a JOIN of that data after a

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SELECT operation to retrieve employee names and job titles from another table, (see col. 1, lines 30-35).

As per claim 7, Beavin discloses, "reading a second query language command from the first query element table", (see col. 10, lines 50-64).

As per claim 8, Beavin discloses, "reading a plurality of names of columns of a target data table from the second query element table" as sequential read operations needed, and the like to determine how it will retrieve data, the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 1-6).

As per claims 9 and 24, Beavin discloses, "wherein the step of assembling the query string includes the sub-step of concatenating together a second plurality of elements that include the second query language command and the plurality of names of columns of the target data table" as another operation permitted by SQL is the "JOIN" operation, which concatenates all or part of two or more tables to create a new resulting table, and then performing a JOIN of that data after a SELECT operation to retrieve employee names and job titles from another table, (see col. 1, lines 30-35).

As per claims 10, 25 and 32, in addition to the discussion in claim 1, Beavin further discloses "assembling a data base table storage command string from the second plurality of

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elements” as another operation permitted by SQL is the ‘JOIN’ operation, which concatenates all or part of two or more tables to create a new resulting table, (see col. 1, lines 33-35); and “executing the data base table storage command string in order to modify a target data table”, (see col. 8, lines 26-32).

As per claims 11, 26 and 36, Beavin discloses, “wherein said storage command string is Structured Query Language UPDATE command string”, (see col. 12, 61-63 lines 15-16).

As per claims 12 and 27, Beavin discloses, “wherein said storage command string is Structured Query Language INSERT command string”, (see col. 9, lines 42-61).

As per claims 13 and 28, the limitations of claims 13 and 28 are rejected in the analysis of claim 1, and these claims are rejected on that basis.

As per claims 14 and 29, Beavin discloses, “wherein said second plurality of elements contain data used to specify the location in which data elements are to be stored in the target data table”, (see col. 9, lines 42-58).

As per claims 15 and 30, Beavin discloses, “executing said storage command string so as to cause all or a part of said source data set to be stored”, (see col. 8, lines 26-32).

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As per claim 23, Beavin discloses, “wherein the step of reading a plurality of arguments for the query language command from the second table includes the sub-step of reading a plurality of names of columns of a target data table from the second query element table” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads, and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, the selected query plan can be displayed to the user in response to the inclusion of the explain function in the user interactive commands, (see col. 10, lines 50-64).

As per claim 33, Beavin discloses, “a data processing system comprising: means for storing one or more data tables” as SQL provides tables operations with which users can request database information and form one or more new tables out of the operation results, (see col. 1, lines 25-27), “means for reading a first plurality of elements of a first query from a first set of one or more query element tables” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads, and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers (see col. 10,

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lines 50-64), “the first plurality of elements and the one more query element tables comprising at least one of a query language command and a command argument” as the SQL processor considers the available access paths to the data and considers system statistics on the data to be accessed to select what it considers to be the most efficient access path to evaluate the query and retrieve the results, in which considering the available access paths, the processor checks table indexes and sequential read operations needed, (see cols. 1-2, lines 61-2). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, in which can be linked to perform complex sets of table operations with a single statement;

“means for assembling a query string from the first plurality of elements” as another operation permitted by SQL is the ‘JOIN’ operation, which concatenates all or part of two or more tables to create a new resulting table (see col. 1, lines 33-35), “the query string comprising a database query command to be executed by a database search engine” as the computer system that represent commands for performing various search and retrieval functions against the databases 104, 106, in which these search and retrieval functions are generally referred to as queries, (see col. 6, lines 46-50); and

“means for executing the first query string to retrieve results from one or more source data tables” as wherein the query processor executed step of receiving comprises the steps of detecting a parameter of the query that indicates an access path will be specified by the user; and retrieving a data table that specifies the access path desired by the user, (see col. 15, lines 21-26).

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As per claim 34, in addition to the discussion in claim 25, Beavin "means for reading a second plurality of elements of a query from a second set of one or more tables" as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads' and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column' to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, (see col. 10, lines 50-59). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, can be linked to perform complex sets of table operations with a single statement;

"means for assembling a data base table storage command string from the second plurality of elements" as another operation permitted by SQL is the 'JOIN' operation, which concatenates all or part of two or more tables to create a new resulting table, (see col. 1, lines 33-35).

As per claim 35, Beavin discloses "a computer-readable medium having stored thereon a data structure: a name of a first table that includes data to be processed" as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads' and system-held statistics on the data to be accessed 'the

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size of the table, the number of distinct values in a particular column' to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, (see col. 10, lines 50-64); and

“a name of query element a second table that includes arguments to be used in composing a database command to process the data” as SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables, or views, can be linked to perform complex sets of table operations with a single statement, the tables operations are specified in SQL statements called queries, (see col. 1, lines 25-30).

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Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

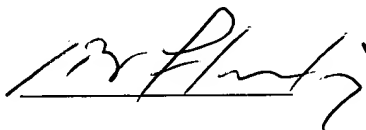
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Contact Information

4. Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

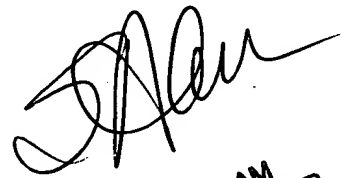
If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Mr. BREENE JOHN E can be reached at (703) 305-9790. The FAX phone numbers for the Group 2100 Customer Service Center are: *After Final* (703) 746-7238, *Official* (703) 746-7239, and *Non-Official* (703) 746-7240. NOTE: Documents transmitted by facsimile will be entered as official documents on the file wrapper unless clearly marked "***DRAFT***".

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2100 Customer Service Center receptionist whose telephone numbers are (703) 306-5631, (703) 306-5632, (703) 306-5633.



Jean Bolte Fleurantin

12/12/03



SHAHID ALAM
PRIMARY EXAMINER